AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A method for making a semiconductor device comprising:

forming a conductive path on a substrate, the conductive path made of ~~a first material~~ copper;

depositing a ~~second material~~ metal more noble than copper on the conductive path, ~~wherein the second material does not comprise the first material~~ from an aqueous solution by immersion plating; and

facilitating a diffusion of the ~~second material~~ metal more noble than copper into the conductive path, the ~~second material~~ metal more noble than copper having a ~~predetermined~~ low solubility to substantially diffuse ~~to at least one of an interface and~~ into grain boundaries ~~within the first material~~ of the conductive path to significantly increase reliability of the conductive path.

2. (Currently Amended) The method of claim 1, wherein the ~~first material comprises a metal~~ metal more noble than copper comprises platinum.

3. (Currently Amended) The method of claim ~~2~~ 1, wherein ~~the metal is copper~~ the metal more noble than copper comprise rhodium.

4. (Currently Amended) The method of claim ~~3~~ 1, wherein forming the conductive path comprises a damascene process.

5. (Currently amended) The method of claim 1, wherein ~~depositing the second material comprises plating the second material on the conductive path~~ the metal more noble than copper comprises gold.

6. (Cancelled)

7. (Currently Amended) The method of claim 1 ~~further comprising forming a barrier layer between the substrate and the conductive path~~, wherein the metal more noble than copper comprises ruthenium.

8. (Currently Amended) The method of claim 1, ~~wherein the substrate comprises an interlayer dielectric (ILD)~~ metal more noble than copper comprises osmium.

9. (Cancelled)

10. (Currently Amended) The method of ~~claim 11~~ claim 1, wherein the ~~second material further~~ metal more noble than copper comprises ~~at least one of silver, gold, palladium, ruthenium, rhodium, osmium,~~ iridium~~, and platinum~~.

11. (Currently Amended) The method for making a semiconductor device comprising:

forming a conductive path on a substrate, the conductive path made of ~~a first material~~ copper;

depositing ~~a second material~~ silver on the conductive path by immersion plating subsequent to planarizing the substrate having the conductive path; and

facilitating a diffusion of the second material into the conductive path, the second material having a predetermined solubility to substantially diffuse to at least one of an interface and grain boundaries within the first material to significantly increase reliability of the conductive path.

12. (Original) The method of claim 11, wherein depositing the second material comprises removing an oxide from the conductive path, and immersing the conductive path in an aqueous solution having at least the second material.

13. (Original) The method of claim 1, wherein depositing the second material comprises depositing the second material before a planarization process of the substrate having the conductive path.

14. (Original) The method of claim 13, wherein depositing the second material comprises removing an oxide from the conductive path, immersing the conductive path in an aqueous solution having at least the second material and providing a planarization process of the substrate having the conductive path.

15. (Original) The method of claim 1, wherein facilitating diffusion of the second material comprises heat treating the conductive path having the deposited second material.

16. (Original) The method of claim 15, wherein heat treating the conductive path comprises annealing the conductive path at a predetermined temperature and time to substantially diffuse the second material to the grain boundaries within the first material, the predetermined temperature and time based at least in part on the first and second material.

17. (Original) The method of claim 1, wherein the conductive path comprises at least of one of a conductive line and a conductive interconnect.

18-26. (Cancelled)

27. (Currently Amended) A method for making a semiconductor device comprising:

forming a conductive path on a substrate, the conductive path made of a first material;

removing an oxide from the conductive path by etching the conductive path with a medium having a mildly acidic or mildly basic solution;

depositing a second material on the conductive path after removing the oxide from the conductive path; and

facilitating a diffusion of the second material into the conductive path, the second material having a predetermined solubility to substantially diffuse to at least one of an interface and grain boundaries within the first material to significantly increase reliability of the conductive path.

28. (Cancelled)

29. (Previously presented) The method of claim 27, wherein the second material further comprises at least one of silver, gold, palladium, ruthenium, rhodium, osmium, iridium, and platinum.